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PTO/SB/17 (10-01)
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FEE TRANSMITTAL for FY 2002

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT (\$) 110

Complete if Known

Application Number	09/614,682
Filing Date	July 12, 2000
First Named Inventor	Summers et al
Examiner Name	Nguyen, J.
Group Art Unit	2815
Attorney Docket No.	79,812

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METHOD OF PAYMENT		FEE CALCULATION (continued)																																																																																											
<p>1. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to</p> <p>Deposit Account Number: 50-0281</p> <p>Deposit Account Name: Naval Research Laboratory</p> <p><input checked="" type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17</p> <p><input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27</p> <p>2. <input type="checkbox"/> Payment Enclosed:</p> <p><input type="checkbox"/> Check <input type="checkbox"/> Credit card <input type="checkbox"/> Money Order <input type="checkbox"/> Other</p>		<p>3. ADDITIONAL FEES</p> <table border="1"><thead><tr><th>Large Entity</th><th>Small Entity</th><th>Fee Description</th></tr></thead><tbody><tr><td>105 130 205 65</td><td></td><td>Surcharge - late filing fee or oath</td></tr><tr><td>127 50 227 25</td><td></td><td>Surcharge - late provisional filing fee or cover sheet</td></tr><tr><td>139 130 139 130</td><td></td><td>Non-English specification</td></tr><tr><td>147 2,520 147 2,520</td><td></td><td>For filing a request for ex parte reexamination</td></tr><tr><td>112 920* 11 2 920*</td><td></td><td>Requesting publication of SIR prior to Examiner action</td></tr><tr><td>113 1,840* 113 1,840*</td><td></td><td>Requesting publication of SIR after Examiner action</td></tr><tr><td>115 110 215 55</td><td></td><td>Extension for reply within first month</td></tr><tr><td>116 400 216 200</td><td></td><td>Extension for reply within second month</td></tr><tr><td>117 920 217 460</td><td></td><td>Extension for reply within third month</td></tr><tr><td>118 1,440 218 720</td><td></td><td>Extension for reply within fourth month</td></tr><tr><td>128 1,960 228 980</td><td></td><td>Extension for reply within fifth month</td></tr><tr><td>119 320 219 160</td><td></td><td>Notice of Appeal</td></tr><tr><td>120 320 220 160</td><td></td><td>Filing a brief in support of an appeal</td></tr><tr><td>121 280 221 140</td><td></td><td>Request for oral hearing</td></tr><tr><td>138 1,510 138 1,510</td><td></td><td>Petition to institute a public use proceeding</td></tr><tr><td>140 110 240 55</td><td></td><td>Petition to revive - unavoidable</td></tr><tr><td>141 1,280 241 640</td><td></td><td>Petition to revive - unintentional</td></tr><tr><td>142 1,280 242 640</td><td></td><td>Utility issue fee (or reissue)</td></tr><tr><td>143 460 243 230</td><td></td><td>Design issue fee</td></tr><tr><td>144 620 244 310</td><td></td><td>Plant issue fee</td></tr><tr><td>122 130 122 130</td><td></td><td>Petitions to the Commissioner</td></tr><tr><td>123 50 123 50</td><td></td><td>Processing fee under 37 CFR 1.17(c)</td></tr><tr><td>126 180 126 180</td><td></td><td>Submission of Information Disclosure Stmt</td></tr><tr><td>581 40 581 40</td><td></td><td>Recording each patent assignment properly (times number of properties)</td></tr><tr><td>146 740 246 370</td><td></td><td>Filing a submission after final rejection (37 CFR § 1.129(a))</td></tr><tr><td>149 740 249 370</td><td></td><td>For each additional invention to be examined (37 CFR § 1.129(b))</td></tr><tr><td>179 740 279 370</td><td></td><td>Request for Continued Examination (RCE)</td></tr><tr><td>169 900 169 900</td><td></td><td>Request for expedited examination of a design application</td></tr><tr><td colspan="2">Other fee (specify) _____</td><td></td></tr></tbody></table>		Large Entity	Small Entity	Fee Description	105 130 205 65		Surcharge - late filing fee or oath	127 50 227 25		Surcharge - late provisional filing fee or cover sheet	139 130 139 130		Non-English specification	147 2,520 147 2,520		For filing a request for ex parte reexamination	112 920* 11 2 920*		Requesting publication of SIR prior to Examiner action	113 1,840* 113 1,840*		Requesting publication of SIR after Examiner action	115 110 215 55		Extension for reply within first month	116 400 216 200		Extension for reply within second month	117 920 217 460		Extension for reply within third month	118 1,440 218 720		Extension for reply within fourth month	128 1,960 228 980		Extension for reply within fifth month	119 320 219 160		Notice of Appeal	120 320 220 160		Filing a brief in support of an appeal	121 280 221 140		Request for oral hearing	138 1,510 138 1,510		Petition to institute a public use proceeding	140 110 240 55		Petition to revive - unavoidable	141 1,280 241 640		Petition to revive - unintentional	142 1,280 242 640		Utility issue fee (or reissue)	143 460 243 230		Design issue fee	144 620 244 310		Plant issue fee	122 130 122 130		Petitions to the Commissioner	123 50 123 50		Processing fee under 37 CFR 1.17(c)	126 180 126 180		Submission of Information Disclosure Stmt	581 40 581 40		Recording each patent assignment properly (times number of properties)	146 740 246 370		Filing a submission after final rejection (37 CFR § 1.129(a))	149 740 249 370		For each additional invention to be examined (37 CFR § 1.129(b))	179 740 279 370		Request for Continued Examination (RCE)	169 900 169 900		Request for expedited examination of a design application	Other fee (specify) _____		
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SUBMITTED BY		Complete (if applicable)	
Name (Print/Type)	Jane Barrow	Registration No. (Attorney/Agent)	34,217
Signature	[Signature]	Telephone	202-404-1551
		Date	6/27/02

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PATENT APPLICATION
Navy Case No. 79,812

Reply Under 37 C.F.R.

§ 1.116

Expedited Procedure

Group Art Unit 2815

#11/B (ME)
7/17/02
Sunder

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Summers et al.

Serial No.: 09/614,682

Filed: July 12, 2000

For: CMOS DEVICES HARDENED AGAINST TOTAL DOSE RADIATION

Examiner: Nguyen, J.

Group Art Unit: 2815

June 26, 2002

Box AF

Commissioner for Patents

Washington, D.C. 20231

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AMENDMENT UNDER 37 C.F.R. § 1.116

Dear Sir:

In response to the Office Action mailed on March 5, 2002, finally rejecting claims 1-11, please amend the above-identified application as follows:

In the Drawings:

New Fig. 1 is attached hereto.

In the Specification:

Please amend the specification at page 5, second complete paragraph as follows:

B' The negative bias source 22 is adapted for applying a steady negative back bias to the substrate at a voltage that mitigates total dose radiation failures. The device operates by mitigating leakage currents about the device, while allowing the device to operate within its operational range, i.e., without changing the threshold voltage of the device to a degree that will cause the device to operate poorly. Typically, this negative bias will be between about -3V and about -0.5 V, relative to the source. The inventors have recognized that in the current generation of commercial CMOS devices, total dose radiation failures arise in the isolation region 24, rather than in the gate region.